

CLAIMS

What is claimed is:

1. A method for address management of mobile nodes, said method comprising the steps
of:

5 receiving a registration request message from a first mobile node; and
assigning at least one globally unique port number to said first mobile node.

2. The method of claim 1, further comprising the step of:
transmitting said at least one globally unique port number to said first mobile node.

3. The method of claim 1, further comprising the steps of:
assigning a network address to said first mobile node; and
transmitting said network address and said at least one globally unique port number to
said first mobile node.

4. The method of claim 3, wherein said network address is an Internet Protocol (IP)
address.

5. The method of claim 3, wherein said network address can be shared with a second
20 mobile node.

6. The method of claim 5, wherein said at least one globally unique port number consists
of a first range of contiguous port numbers.

7. The method of claim 6, further comprising the step of:

assigning a second range of contiguous port numbers to said second mobile node,
wherein said first and second ranges are disjoint.

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8. The method of claim 6, wherein said first range of contiguous port numbers is defined
by a low port number and a high port number, said method comprising the step of:

transmitting a registration reply message to said first mobile node, said registration reply
message including a port range extension, said port range extension including said low port
number and said high port number.

9. The method of claim 1, wherein said registration request message includes a care-of
address for said first mobile node.

10. The method of claim 9, further comprising the step of:

associating said care-of address with said at least one globally unique port number.

11. The method of claim 9, further comprising the steps of:

assigning a network address to said first mobile node; and

associating said care-of address with said network address and said at least one globally
unique port number.

12. The method of claim 11, further comprising the steps of:

receiving data packets destined for said network address and one of said at least one globally unique port number; and

forwarding said data packets to said care-of address.

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13. A system for address management of mobile nodes, said mobile nodes including at least a first mobile and a second mobile node, said system comprising:

a home agent, said home agent transmitting registration reply messages in response to valid registration request messages; and

a database accessible by said home agent, said database containing at least a first data record and a second data record, said first data record identifying a first network address and a first set of one or more globally unique port numbers for said first mobile node, said second data record identifying a second network address and a second set of one or more globally unique port numbers for said second mobile node.

14. The system of claim 13, wherein said first and second network addresses are the same, and said first and second sets are disjoint.

15. The system of claim 13, wherein said first data record includes a first care-of address for said first mobile node, said first care-of address being different from said first network address.